

Notes and descriptions of new and little known species of American Reptiles.

BY E. D. COPE.

OPHIDIA.

CHILOMENISCUS Cope.

Size small. Form stout, body cylindrical, the head not distinct. Muzzle rounded, very prominent, and much depressed. Rostral plate large, with an extensive superior surface, and presenting an obtuse angle between the prefrontals: the inferior surface greater than the superior, owing to the backward position of the mandible. Head shields broad, normal, except in the confluence of the prefrontals with the nasals. Nostril connected to the anterior suture of the postfrontal by a groove. Loreal none, the postfrontals reaching the labials. One pre- two postoculars. Scales smooth. Tail short, the urosteges and anal plate divided. Teeth equal, or the posterior a little stouter. Palatines and pterygoids present.

This truly Calamarian genus is analogous to *Stenorhina* in the union of the nasal and prefrontal shields, and perhaps the form of the muzzle and inferior position of the mouth indicates affinity to *Chionactis*.

C. STRAMINEUS Cope.

Common suture of the prefrontals very small, (in one specimen obliterated by the rostral,) that of the postfrontals but half the length of their sutures with the prefrontals. Vertical presenting an obtuse angle anteriorly; the superciliary sutures converging posteriorly; posterior angle less than a right-angle. Occipitals short, their common suture scarcely longer than the frontal suture of the vertical. Superior labials seven, the second reaching the minute preocular, or should that plate be absent, as will probably occur occasionally, forming with the third and fourth the inferior border of the orbit. Inferior labials eight, fifth the largest. Genaials two pair, posterior half the length of the anterior. Temporals 3—3; a larger central plate opposite the occipital suture. Scales in thirteen rows, hexagonal on the flanks, a little elongated on the back. Gastrosteges 117; one divided anal; urosteges 22. Total length of the largest specimen, nine inches; the tail, thirteen lines.

Coloration.—Inferiorly, and upon the first and second rows of dorsal scales, pale straw color. Superiorly, brownish straw color, each scale with a deep brown dot near its posterior extremity. Top of the head grayish, minutely punctulated with darker.

Hab. Cape St. Lucas, Lower California. Discovered by Mr. John Xantus. Museums of the Smithsonian Institution, Washington, and Academy of Natural Sciences, Philadelphia.

CATOSTOMA Wagler.

In the *Monatsberichte der Preuss. Acad. von Wissensch.*, 1859, p. 275. Herr Peters identifies this genus with the *Rhabdosoma* of Duméril, employing, however, the name *Geophis*, which was given by Fitzinger in the *Systema Reptilium*, p. 25, many years subsequently to that of Wagler. The typical species is *C. chalybeum*, which the combined diagnoses of Wagler and Peters do not enable me to recognize as having yet been received at our Museum from Mexico. The most common species of the north eastern region of that country will henceforth stand as *Catostoma semidoliatum* with the synonymes *Rhabdosoma semidoliatum* Dum. & Bibr., and *Geophis semidoliatum* Peters, l. c. 276.

NINIA Baird & Girard.

Professor Baird has kindly pointed out to me that this genus has been identified 1860.]

tified with the *Streptophorus* of Duméril, by Prof. Jan of Milan, and that the type of the former, *N. diademata* B. and G. is the *Streptophorus bifasciatus* of the *Erpetologie Generale*. From an examination of the type specimen of Baird and Girard's description, I have become convinced of the correctness of this identification. The species of the genus will then stand:

NINIA DIADEMATA. *Streptophorus bifasciatus*, Erp. Gen. vii. 520.

*NINIA ATRATA.** *Streptophorus Drozii*, l. c. p. 518.

NINIA LANSBERGII. *Streptophorus Lansbergii*, l. c. p. 518.

NINIA SEBAE. *Streptophorus Sebae*, l. c. p. 515.

In these Proceedings, 1860, p. 77, I questioned the propriety of associating this genus with the genera of *Calamariinae*. I now believe that it cannot be arranged in that sub-family.

TROPIDOCOLONION Cope.

T. KIRTLANDII Cope.

Regina Kirtlandii Kennicott, Proc. Acad. Nat. Sci. 1856, p. 95.

This beautiful species, first described by Mr. Kennicott under Baird and Girard's genus *Regina*, appears to be congeneric with the *Tropidocolonion lineatum* Cope of Kansas. In neither species is the nasal plate entirely divided, but a groove connects the nostril with the labial suture. The anal plate in the *Kirtlandii* is divided, entire in the *lineatum*. I am not prepared to regard this difference as generic here, though it certainly is among some serpents. In dentition this genus is isodont, and the head is not distinct from the body.

The Academy's Museum possesses a specimen of the *T. Kirtlandii* from Columbus, Ohio, presented by Prof. Lesquereux, and a second, half grown, from the neighborhood of *Trenton, New Jersey*, discovered by my friend Mr. C. C. Abbott of that place.

This specimen differs in no respect from that from Ohio. This species has therefore an extensive distribution, ranging from New Jersey to Illinois. Its habits according to Mr. Kennicott, are terrestrial, which statement is confirmed by the observations of Mr. Abbott.

TROPIDONOTUS Kuhl.

T. USTUS Cope.

Scales in twenty-one longitudinal rows, all carinate, those of the first, faintly. Those of the second row not larger than those of the vertebral. Head narrow, not depressed, the end of the muzzle slightly elevated. Lateral borders of the vertical plate slightly concave, not convergent posteriorly. Pre-frontals small. Nostril in the supero-posterior angle of the prenasal plate. Loreal longer than high. Preocular single, two postoculars. Superior labials eight, fourth and fifth bounding the orbit. Lower postocular in contact with the occipital and a large temporal plate, which extends to the eighth labial.

A second large, and three small temporals border the occipitals exteriorly. Ten inferior labials, sixth largest. Posterior pair of genials longer than the anterior. Tail one-fourth the total length. Gastrosteges 126; anal one, divided; urosteges 66. Total length 12 in., 1 line. Tail 2 in. 10 l.

Coloration. Above, a yellowish ferruginous, pale upon the head, very deep upon the tail. Upon careful examination there are to be seen very indistinct erect half bands upon each side, extending from the first to the central rows of scales, alternating with each other. Posteriorly they become entirely transverse. Belly salmon color, passing into orange ferruginous upon the urosteges. Each gastrosteges has a large central area of yellow, bordered on each side with wax yellow, (*cereus* Lat.) these colors, however, blending posteriorly.

*See Proc. Phil. Acad. 1860, p. 76.

One specimen in alcohol, sent to the Smithsonian Institution, from Charlotte Harbor, Florida, by E. M. Baker.

T. CELAENO Cope.

Scales in nineteen or twenty-one rows, all carinate except the first. Head broad and distinct posteriorly, constricted at the orbits, and remarkably narrow anteriorly. Profile of the crown slightly, but regularly convex. Superciliary plates narrow and elongate. Vertical elongate, its lateral borders concave, not convergent posteriorly, its length greater than that of the occipital suture. Frontals small, the anterior almost triangular. Nasals and loreal rather large, the posterior border of the latter very oblique. Preocular one, postoculars three. Superior labials eight, eye resting on the fourth and fifth, sixth and seventh largest and bounded above by the first temporal. Remaining temporals four on each side. Inferior labials ten, sixth longest. Posterior genieals longer than the anterior. General form rather slender, tail one-fifth the total length. Gastrosteges 145; one divided anal; urosteges 71.

Coloration. The general hue is leaden black above and below, with the following paler markings. A band of leaden gray commences upon the neck, occupying the second, third, and part of the first rows of scales. This extends to the anus, becoming darker, and leaving the first row of scales posteriorly. Upon the anterior third of the body irregular narrow vertical bands extend from this, separated by black spaces of one and a half or two scales in width, which spaces are sometimes enclosed by the confluence of the bands on each side of the black vertebral line.

One specimen (No. 351,) discovered by Mr. John Xantus, at Cape St. Lucas, Lower California, and deposited in the Museum of the Smithsonian Institute.

This species may be distinguished from those called *Eutania*, by Baird and Girard, by its divided postabdominal scutellum. It, however, bears quite a close resemblance to some of them, e. g., *E. Pickeringii*. It is unnecessary to institute any comparisons with our true *Tropidonoti*, (which possesses the divided scutellum,) it is so strikingly different from all of them.

T. TEPHROPLEURA Cope.

Scales in nineteen or twenty-one longitudinal rows, keels obsolete on the external series only; second row larger than those of the back. Head distinct, narrow anteriorly, its lateral outlines regularly converging from the canthus of the mouth. Outline of the crown slightly depressed behind the plane of the orbits. Head shields much elongated, especially the superciliaries and vertical, the latter twice as long as wide. The lateral borders do not converge, and the posterior angle is but little greater than a right angle. Nasals large; loreal as high as long; two pre-, three postoculars, the former partially united in an old individual. Superior labials eight, sixth much the largest, its superior border and two-thirds of that of the seventh in contact with the very large first temporal. Remaining temporals normally four, sometimes confluent in pairs. Inferior labials ten, sixth the longest. General form stout; tail one-fourth of the total length. Gastrosteges 146; one divided anal; urosteges 83. Total length 32 inches, tail 8 in., 3l.; of a larger specimen, 9 in., 8 l., and the total length 38 in. 3l.

Coloration. Above plumbeous brown, shading into plumbeous grey or ash upon the sides, which color fades into pale greyish yellow upon the middle of the belly. Urosteges ash, with a dark shade along the central suture. When the skin of the upper part of the body is stretched, it is seen to be leaden black along the medial line, with two or three series of quadrate spots of the same color on each side. These spots usually alternate, but are sometimes confluent into oblique bands.

Two specimens (4681 *type*, and 4680,) in the museum of the Smithsonian Institution, Washington, discovered at Cape St. Lucas, in Lower California, by Mr. John Xantus.

The number of rows of scales will distinguish this species from *Tropidonotus Woodhousei* Hallow. *Tropidonotus Couchii* Cope (*Nerodia Couchii* Kennicott, Proc. Phila. Acad., Aug., 1860), has a very differently formed head, but one preocular shield, and a few other distinguishing peculiarities. *Tropidonotus validus* Cope (*Regina valida* Kenn. l. c.) possesses a short head, a rostral plate as high as broad, one preocular, and small occipitals, according to Mr. Kennicott, none of which peculiarities exist in the *T. tephroleura*.

The three *Tropidonotes* here described possess the true syncranterian type of dentition. So also, does the *Trop. rigidus* Holbr., but the *T. leberis* Holbr., and some other species included by Baird & Girard in their genus "Regina," exhibit an almost constant isodont dentition. It is possible that a genus intermediate between *Tropidonotus* and some forms of *Homalopsinæ*, may exist in nature; that such genus be characterized by the possession of teeth of equal lengths, and that the only name applicable to it be *Regina*: yet the generic separation of the *rigidus* from the *leberis* will not accord with the present views of most herpetologists.

HERPETODRYAS Boie.

H. BODDAERTII Schleg.

A variety of this species has been obtained in the vicinity of Xalapa, Mexico, by Sr. R. M. DeOca. It is distinguished by the color of the tail, which is of a bright salmon tint. Mas. Smithsonian Inst.

SPILOTES Wagler.

The species of this genus may be divided into two sections, one characterized by the possession of keeled scales, the other having them smooth. To the former belong the *S. pullatus*, *poecilostoma* and *poecilnotus*; to the latter, which Fitzinger has called *Drymarchen*, the *S. corais* and *melanurus* pertain. All the structural peculiarities of this latter group are shared by the *Colubri Couperi* and *obsoletus* of Holbrook's American Herpetology. The latter species is not the *obsoletus* of Say, as supposed by Dr. Holbrook, which has been correctly identified by Mr. Kennicott, and shown to belong to a different genus; vid. *Scotophis obsoletus* Kenn. Proc. Acad. Aug., 1860. We therefore propose that Holbrook's species in question be known henceforth as

SPILOTES COUPERI Cope.

Syn. *Coluber Couperi* Holbrook, N. Am. Herp. iii. 75, pl. xvi.
Georgia Couperi Baird & Girard, Catalogue, p. 92.

SPILOTES EREBENNUS Cope.

Syn. *Coluber obsoletus* Holbr. l. c. iii. p. 61, pl. xii.
Georgia obsoleta Bd. & Grd. l. c. p. 158. U. S. and Mex. Bound. Surv. Rep. pl. xv.

PITYOPHIS Holbrook.

P. HÆMATOIS Cope.

Scales in from thirty-one to thirty-five rows, the exterior ten or twelve entirely smooth, the central faintly carinate; the scales three times as wide as long near the middle of the body. Head distinct, elongate, depressed, especially upon the region of the sutura coronalis. Occipital shield as long as the vertical, but subject, as in other species of the genus, to subdivision. Length of the vertical one and a half times the anterior breadth, the superciliary borders concave and slightly divergent posteriorly. Posterior angle obtuse. Postfrontals four, elongate, all bordering the vertical. Rostral not prominent; as broad as high, possessing six sutural borders, the nasal twice as long as any of the others. Nasal shields large, loreal longer than high. Preoculars normally two, sometimes three, or one. Postoculars three, exceptionally four.

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Superior labials normally nine, (exceptionally ten,) the fifth entering the orbit. Inferior labials normally twelve; genials two pair, anterior twice the length of the posterior. Tail one-seventh of the total length. Gastrosteges 247, an entire anal, urosteges 61. Total length 5 ft. 4 in. Tail 9 in.

Coloration. The ground color above and below is a rich straw yellow. The muzzle is shaded anteriorly with ashy or fuscous; this color gradually fades into a lively sanguineous or testaceous, which tint prevails upon the posterior part of the head, and anterior part of the body. There arises upon the tenth or eleventh row of the scales of the neck upon each side, a longitudinal band of the same color, which deepens posteriorly, and unites with its fellow at intervals of three or four scales by a gradual widening upon its dorsal border. Thus a scalariform series of dorsal blotches is formed, whose transverse diameter increases regularly posteriorly, and whose intervals diminish, being anteriorly four scales,—upon the tail, one and a half. The connecting band remains unbroken upon the anterior fourth of the body only. Separated from this by an interval of one half or a whole scale, another longitudinal and very narrow band arises on the neck. It is much more distinct opposite the intervals between the dorsal blotches, and upon the disappearance of the line connecting the latter, partially assumes its position, and breaks up into an alternating series of very elongated spots. The dorsal intervals are thus widened to a breadth of seven and two halves scales. There also commences upon the neck a second lateral series of spots, which occupy a length of five scales on the fourth, fifth and sixth rows. Their length decreases to three scales opposite the anus, where they unite with the superior lateral series. Every second pair of gastrosteges is tipped with sanguineous. All the markings of this serpent are sanguineous anteriorly, but deeper posteriorly, passing through shades of maroon, until upon the terminal third of the total length they are entirely black. A black or maroon band passes along the suture of the urosteges. Belly immaculate.

Hab. Cape St. Lucas, Lower California, sent by Mr. John Xantus. Museums Smithsonian, Washington; Acad. Nat. Sciences, Philada.

This species will compare favorably for beauty with the elegant *Tropidonotus concinnus* of the lamented Dr. Hallowell, but readily yields the palm to the gorgeous *Elaps eurynanthus* of Kennicott.

LYCODON Boie.

Syn. *Lycognathus** Duméril, Erp. Gen. vii. p. 916.

L. LYROPHANES Cope.

In describing this species, I will repeat some of the generic characters, premising that the form belongs probably to the Dipsadinae, to the typical forms of which it is connected by *Tripanurgus Fitz.*

Dentition resembling that of *Macroprotodon cucullatus Cope*. Seven teeth upon the superior maxillary bone, of which one posterior is elongate and grooved; three central, small and recurved, and three anterior, very long, the first longest and least recurved. The central three are not separated from those anterior and posterior to them by spaces wider than those existing between themselves. Palatine teeth six, the anterior three the longest, all longer than the pterygoids. The three anterior mandibular teeth longer and more widely spaced than the posterior, having an outward direction as in *Hormonotus Hallow.*

Scales in twenty-one rows, rather broad posteriorly and upon the middle of the body, not larger upon the vertebral line. The body anteriorly is slender, contracting to a small neck. Tail less than one-sixth of the total length. Head very distinct, the temples much swollen, so that the greatest breadth in life is just posterior to the eyes, though the length of head posterior to the

* See my remarks upon this genus, Proc. Phila. Acad. 1850, p. 262.

angle of the vertical shield is one line greater than that anterior. Side of the head constricted at the orbits, the muzzle rather narrow and truncate. Rostral plate broader than high, with but four sutural borders, the superior very long; the apex apparent upon the surface of the head. Prefrontals much broader than long; one-third the size of that part of the postfrontals visible from above. Upon a vertical view, the postfrontals appear longer than broad. Occipitals, superciliaries and vertical developed; the last presenting a right angle posteriorly, and having the lateral borders slightly concave and converging; the first not longer, and about as wide as long, in contact with a large scale in their posterior, common emargination. Nasal plates distinctly divided, very small, higher than long. Loreal plates two, the anterior higher than long, intercalated superiorly between the pre- and postfrontal, posterior as long as high. Preoculars three, the superior largest, not in contact with the vertical; the inferior bounded anteriorly by the third upperlabial. Postoculars three, the inferior a little the largest. Superior labials nine, fourth and fifth entering the orbit, sixth largest, higher than broad. Inferior labials twelve, the third and fourth narrow, and much produced posteriorly. Geniales two pair, the anterior longest. Gastrosteges 236, one divided anal, urosteges 70. Total length 27 in. 10 lin. Tail 4 in. 4 lin.

Coloration.—The ground color is a light grey. The muzzle is crossed by an indistinct ashy band, which extends upon the anterior part of the postfrontals. The posterior half of these plates is involved in a deep brown band which crosses the head between the eyes, whose posterior border is very concave, extending upon the superciliaries to the vertical plane of the pupil of the eye. This band is continued posteriorly, upon the inferior postocular and sixth upperlabial. A pair of broad diverging bands commences one band on either side of the centre of the vertical, crosses the superciliary and occipital shields, and following the expanded outline of the temporal and tympanic regions, contracts and becomes longitudinal and parallel upon the neck. A brown spot upon the posterior extremity of the vertical plates with a posterior elongation, completes the resemblance of this figure to a lyre, or still more to that musical (?) instrument familiarly known to children as the "Jews-harp." The ground color appears upon the vertex as an anchor-shaped figure, and on the cheek, as an oblique band. The back, as far as the anus, is ornamented with twenty-one pairs of deep brown spots, their gemination only apparent anteriorly by the punctulate character of the scales in the intervals between the pairs. These intervals are always about three scales wide; the lesser, two and a half anteriorly, one and a half posteriorly. Dorsal spots seven scales wide; as the scales are broader posteriorly, the spots are also. There is an irregular series of lateral spots, one opposite each of the intervals, sometimes confluent with the dorsal spots: anteriorly they form a very narrow broken band. Another series of spots involves the tips of pairs of the gastrosteges, which are separated by two, three, four, or even five immaculate ones. Ten confluent pairs of spots on the upper surface of the tail. Whole under surface whitish.

Type (Sm. No. 4080), discovered by Mr. J. Xantus at Cape St. Lucas, Lower California. Another specimen collected by Mr. Irwin, at Ft. Buchanan, Arizona, appears to be identical, though in a bad state of preservation.

The discovery of this species by Messrs. Irwin and Xantus, is one of the most interesting additions to North American Herpetology. The form is strictly tropical, for we learn from the *Erpetologie Generale* that the *L. geminata* is Brazilian, and the *scolopax* has been brought from Guiana and Santa Cruz de la Sierra in the eastern region of Bolivia. There are no other species known. It is important to notice that the present species differs from those of South America in the possession of *two* loreals and *three* preoculars, but with our present knowledge of the *Dipsadinæ*, generic difference can hardly be predicated upon peculiarities of this kind.

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TELEURASPIS Cope.

In these Proceedings for December, 1859, I characterized a genus of crotaline serpents under the above name. It was intended to include all the serpents hitherto arranged with Bothrops, which possess undivided urosteges. In examining the structure of these serpents, I recognized two sections of the genus, the one containing a single species, and characterized by the possession of a series of elevated scales exterior to the superciliary plate; the other containing several species, which have that plate, as is Bothrops, i. e. forming the superior border of the orbit. It seemed probable that these might be generically distinct, yet the possession of the horned eyebrow by but a single species, would not admit of such a conclusion. Since then, I have received from Dr. Albert Günther, his description and beautiful figure of *Lachesis nitidus*, published in the P. Z. S., Nov., 1859. This serpent, which was discovered by Mr. Fraser, in the Andes of Equador, is obviously a second species of the typical group of my *Teleuraspis*; we can perceive no propriety in its position in *Lachesis*, a genus having urosteges anteriorly two-rowed, at the tip four-rowed.

In the Monatsberichte der Königl. Preuss. Acad. for March 1859, p. 278. Herr. Peters characterized a genus *Bothriëchis*, for a species resembling a *Bothrops*, except in its entire urosteges, and keelless scales of the vertex. Excluding the latter character, which does not appear to be of generic value, this genus is exactly co-extensive with my second section of *Teleüraspis*. The following, therefore, will be what appears to me to be the correct nomenclature of the species included by me in *Teleüraspis* l. c. with the addition of those here mentioned.

Crotaline Viperidæ, without crepitaculum having a scaled scarlet vertex, superciliary plates present, and entire urosteges.

1. TELEÜRASPIS Cope, Proc. Philada. Acad. Nat. Sci. 1859, p. 338.
 - T. SCHLEGELI Cope, l. c.
 - Trigonocephalus Schlegeli* Berthold, vid. l. c.
 - T. NITIDA Cope, hujus operis.
 - Lachesis nitidus*, Günther, l. c.
2. BOTHRIËCHIS Peters, Monatsbericht Königl. Preuss. Acad. 1859, p. 278.
 - B. NIGROVIRIDIS Peters, l. c.
 - B. CASTELNAUI Cope, h. op.
 - Bothrops Castelnau* Dum. & Bibr., vid. l. c.
 - Teleüraspis Castelnau* Cope, l. c.
 - B. LANSBERGII Cope, h. op.
 - Trigonocephalus Lansbergii* Schleg., loc.?
 - Teleüraspis Lansbergii* Cope, l. c.
 - ? B. NUMMIFER Cope, h. op.
 - Trigonocephalus nummifer* Rüpp., loc.?
 - ? *Teleüraspis nummifer* Cope, l. c.

Contributions to American Lepidopterology.—No. 6.

BY BRACKENRIDGE CLEMENS, M. D.

TINEINA. Fam. *TORTRICIDÆ*.*ANTITHESIA* Stephens.

Fore wings much narrower at the base than across the inner angle; costa regularly arched; apex obtuse; hind margin obliquely rounded; apical nervule simple; disk moderately broad, rounded behind, and with a secondary cell. 1860.]